IN THE CLAIMS

Claims 1 and 2: canceled

Claim 3 (presently amended): A method of screening a library of materials for viscosity, the method comprising:

providing a library of materials in a plurality of wells defined on a common substrate;

contacting members of said library with at least one capillary for permitting said materials to be passed through a tip portion of said capillary;

applying a first force to said materials;

monitoring the relative flow resistance of said materials in response to said force, while said materials remain on said substrate and without the need to remove said materials from said substrate

~~The method of claim 1, further comprising~~ applying a second force to said library of materials during monitoring; and

ranking members of said library based on the monitored flow resistances.

Claims 4-9: (cancelled)

Claim 10 (previously presented): A method for measuring the viscosity of a plurality of liquid samples, said method comprising the steps of:

providing a library comprising at least four different liquid samples;

contacting said liquid samples with at least one capillary for permitting said liquid samples to be passed through a tip portion of said capillary;

applying a first force to said liquid samples; and

serially measuring the viscosity of each of said samples at a throughput rate no greater than about 10 minutes per sample, while said materials remain on said substrate and without the need to remove said materials from said substrate.

Claim 11 (Original): The method of claim 10 wherein said liquid samples are selected from the group consisting of polymer solutions, polymer emulsions and polymer dispersions.

Claim 12 (Original): The method of claim 10 wherein said liquid samples are members of a combinatorial library of polymerization product mixtures.

Claim 13 (Original): The method of claim 10 wherein said liquid samples include at

least 8 different samples.

Claim 14 (Original): The method of claim 10 wherein said liquid samples include at least 16 different liquid samples.

Claim 15 (Original): The method of claim 10 said polymer samples include at least 96 different liquid samples.

Claim16 (Original): The method of claim 10 wherein said viscosity is measured at an average sample-throughput of not more than about 8 minutes per sample.

Claim 17 (Original): The method of claim 10 wherein said viscosity is measured at an average sample-throughput of not more than about 5 minutes per sample.

Claim 18 (Original): The method of claim 10 wherein said viscosity is measured at an average sample-throughput of not more than about 2 minutes per sample.

Claim 19 (Original) The method of claim 10 wherein said viscosity is measured at an average sample-throughput of not more than about 60 seconds per sample.

Claim 20 (Original): The method of claim 10 wherein said viscosity is measured at an average sample-throughput of not more than about 30 seconds per sample.

Claim 21 (Previously amended): A method for measuring the viscosity of a plurality of liquid samples, said method comprising the steps of:

providing a library comprising at least four different liquid samples,

contacting said liquid samples with at least one capillary for permitting said liquid samples to be passed through a tip portion of said capillary; and

serially measuring the viscosity of each of said samples at an average sample-throughput of not more than about 10 seconds per sample.

Claim 22 (Original): The method of claim 10 wherein said liquid sample comprises a solid component having a particle diameter ranging from about 1 nm to about 500 nm.

Claim 23 (previously amended): A method for measuring the viscosity of a plurality of liquid samples, said method comprising the steps of:

providing a library comprising at least four different liquid samples,

contacting said liquid samples with at least one capillary for permitting said liquid samples to be passed through a tip portion of said capillary; and

serially measuring the viscosity of each of said samples at a throughput rate no greater than about 10 minutes per sample, wherein said liquid sample comprises a solid component having a particle size ranging from about 5 nm to about 300 nm in diameter.

Claim 24 (Original): The method of claim 10, wherein each said sample is no greater than about 10 ml.

Claim 25 (Original): The method of claim 10, wherein each said sample is no greater than about 2 ml.

Claims 26-29: cancelled

Claim 30 (Original): A method of screening a library of materials for viscosity, the method comprising:

providing a library of at least 16 materials in a plurality of wells defined on a common substrate wherein at least one or more walls define a perimeter of the plurality of wells and wherein each of said plurality of wells has a diameter no larger than about 10 mm;

contacting the at least 16 materials of said library with at least one capillary in a rapid serial manner for permitting said at least 16 materials to be passed through a substantially cylindrical opening extending through one or more tip portions of the at least one capillary wherein the one or more tip portions are contacted with the at least 16 materials by positioning the one or more tip portions within the plurality of wells such that an outer wall of the one or more tip portions is in substantially mating relationship with the at least one or more walls that define the perimeter of the plurality of wells;

applying a first force to the at least 16 materials that causes the at least 16 materials to flow through the one or more tip portions of the at least one capillary tube;

measuring the relative flow resistances of the at least 16 materials in response to the force, while the at least 16 materials remain on the substrate and without the need to remove the at least 16 materials from the substrate wherein the relative flow resistances are measured at a throughput rate of no greater than 4 minutes per sample; and

ranking each of the at least 16 materials relative to each other based on the measured flow resistance.